

Comparison of Random Site Selection Approach with Intensive Survey Approach for the Assessment of the Ohio River Fish Community

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The Ohio River Valley Sanitation Commission (ORSANCO) is a compact of eight states representing interests in the Ohio River basin that has been instrumental in the development of biological monitoring of the Ohio River. In the past, ORSANCO has conducted intensive surveys by sampling every few miles along the Ohio River to estimate the condition of biological resources. These surveys were time-consuming and possibly represented an excessive effort in order to estimate condition. This study investigated the applicability of a random site selection approach as a means of assessing the structure, quality, attributes, and health of the fish assemblage in the Ohio River mainstem. A random site selection approach allows for assessment of conditions with known confidence while also reducing sampling effort. Randomized site selection was provided by the ORD-NHEERL, fish sampling was conducted by ORSANCO, and the ORD-NERL was responsible for analyzing data. However, work with U.S. Environmental Protection Agency (U.S. EPA) Region 3 was instrumental in recognizing the need for the study and providing Regionally Applied Research Effort (RARE) funding for the work. As a testament to the importance of this collaboration, in the future, ORSANCO will be using random site selection for conducting biological assessments to make the most efficient use of its resources.

Although this work was reviewed by the U.S. EPA and approved for publication, it may not necessarily reflect official Agency policy.